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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/570,930	03/08/2006	Dirk Auf Der Heide	03079K	3811
ProPat Klaus Schweitzer 425-C South Sharon Amity Road Charlotte, NC 28211				
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			EXAMINER JACOBSON, MICHELE LYNN	
			ART UNIT 1794	PAPER NUMBER
			MAIL DATE 07/06/2009	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/570,930

**Applicant(s)**

AUF DER HEIDE ET AL.

**Examiner**

MICHELE JACOBSON

**Art Unit**

1794

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 April 2009.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 and 12-14 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-8 and 12-14 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-8 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krallman et al. U.S. Patent Application Publication No. 2003/0059502 (hereafter referred to as Krallman) and Stenger et al. U.S. Patent No. 5,399,427 (hereafter referred to as Stenger) and Ramesh et al. U.S. Patent No. 6,221,410 (hereafter referred to as Ramesh) and Erk et al. U.S. Patent No. 4,897,295 (hereafter referred to as Erk).
3. Krallman teaches a smoke-impregnated at least three-layer tubular film with a polyamide inner and outer layer that gives the finished sausage a smoke flavor. (Para. 13, 26) The casing may be biaxially oriented and shrinkable. (Para. 14) The liquid smoke emulsion that is coated on the inside of the tubular casing is recited to comprise liquid smoke, browning agents and optionally water. (Para. 16-20) The mixture is recited to be applied to the interior surface of the tubular casing using the art-recognized bubble technique. (Para. 30) Useful polyamides for the layers of the invention are recited to be nylon 6 and partially aromatic copolyamide. (Para. 41)
4. Krallman is silent regarding the water vapor permeability of the polyamide layers, and the thickness of the polyamide films.

5. Stenger et al. teaches a polyamide 6 single layer sausage casings composed of nylon 6 having a thickness of 39-41  $\mu\text{m}$  and a water vapor permeability of 20  $\text{g/m}^2/\text{day}$ . (Table 1, comparative example 1) Stenger also recites that sausage casings with too high of a water vapor permeability lead to undesirable weight losses and drying of the sausage. (Col. 1, lines 60-64)

6. Krallman and Stenger both teach polyamide 6 sausage casings comprising Nylon 6. As evidenced by Stenger, the polyamide sausage casing of Krallman would be expected to exhibit a water vapor permeability of 20  $\text{g/m}^2/\text{day}$  and likely less since the casing of Krallman would be comprised of two layers of polyamide.

7. The casing recited by Krallman would inherently have a water vapor permeability of 20  $\text{g/m}^2/\text{day}$  and likely less as evidenced by Stenger. Although Krallman recites that the composition impregnating the polyamide sausage casing of the invention should include a browning agent, it would have been obvious to one having ordinary skill in the art at the time the invention was made to delete the browning agent from the solution in order to lower costs by requiring less materials and to provide a sausage that would be more desirable to an environmentally conscious consumer who prefers food containing fewer synthetic materials. Additionally, since both Krallman and Stenger are directed towards sausage casings it would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized polyamide films of the thickness recited by Stenger (about 40  $\mu\text{m}$ ) to produce the sausage casing recited by Krallman because these thickness were known in the art to be useful.

8. Ramesh teaches that it is known that a polar surface is needed for adhesion of a film to a meat product. Adhesion of the film to the meat is frequently needed in order to prevent "purge", i.e., "cook-out", which can occur during the cooking of the meat packaged in the film if the film does adhere to the meat during cook-in. A polar film surface can be provided by using: (a) polar resin in the film layer in contact with the meat, and/or (b) surface modification, such as corona treatment, of the film surface in contact with the meat. Typically, polar polymers used for meat adhesion include: ethylene/unsaturated acid copolymer, anhydride-containing polyolefin, and polyamide. (Col. 2, lines 13-24)

9. Krallman, Stenger and Ramesh are all directed towards sausage casings. Ramesh evidences that it was well known in the sausage casing art that the interior of sausage casing needs to have a high adhesion to the meat encased. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have corona treated the interior surface, as taught by Ramesh, of the polyamide sausage casing produced by the combination of Krallman with Stenger in order to produce a casing with improved meat adhesion properties in addition to the adhesion provided by the use of a polar polymer. Corona treatment of the invention recited by Krallman produced with the obvious deletion of the browning agent would have produced with the same structure as claimed in claims 1, 2, 4-8 and 12-14.

10. Krallman, Stenger and Ramesh teach what has been recited above but are silent regarding the swelling value of the polyamide inner layer of the casing.

11. Erk teaches polyamide sausage casings containing at least one polyamide which can absorb at least 5% of their own weight in water prior to saturation. (Col. 3, lines 5-10) A sausage casing that is treated with water prior to filling avoids the problems of the need for additional lubricating agent and provides a casing that can be filled to a constant diameter and that can be tied off and clipped without error and without any loss and so that the filled casings display no visible tightening folds. (Col. 2, line 65-Col. 3, line 2) It is particularly preferred that the casing consists of at least one of the polyamides 6, 6.6 or a mixture of PA-6 and PA 6.6. (Col. 4, lines 46-50) The casings produced are recited to have thicknesses between 25 to 100  $\mu\text{m}$ . (Col. 5, lines 19-22)
12. As evidenced by Erk, casings comprising Nylon 6 layers will have a swelling value of greater than 5 %. As such, the casing produced by the combination of Krallman, Stenger and Ramesh would have had a swelling value of greater than 5% for the nylon 6 interior layer of the casing. Such as casing produced by modifying the nylon 6 casing of Krallman optimized as taught by Ramesh with the properties of vapor permeability and swelling value evidenced by Stenger and Erk, respectively, would have been the same as the invention claimed in claims 1-8 and 12-14.
13. Regarding the values of surface energy recited in claims 1, 2 and 13: Corona treating as recited by Ramesh would have inherently produced a polyamide sausage casing with surface energy values such as those recited in claims 1, 2 and 13. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have optimized the amount of corona treatment in order to obtain the most

beneficial properties of adhesion. Such an optimization would have resulted in a casing such as claimed in claims 1, 2 and 13.

14. Regarding the thickness values for the single and multilayer casings recited in claims 1 and 13: It would have been obvious to one having ordinary skill in the art at the time the invention was made to have varied the result effective variable of thickness of the polyamide layers depending on the strength required for the application the casing was being used for. Such an optimization of the thickness of the polyamide layers for the casing produced by the combination enumerated above would have resulted in the invention claimed in claims 1 and 13.

15. Regarding claim 5: It is well known in the sausage casing art to produce seamless polyamide casings. The liquid smoke material recited by Krallman is applied to the sausage casing in tubular form, therefore it would have been obvious to one of ordinary skill in the art to have utilized either a seamed or seamless polyamide casing for the invention of Krallman. Production of the corona treated invention of Krallman utilizing a seamless polyamide casing would have produced the invention as claimed in claim 5.

16. Regarding claims 6 and 7: Krallman recites that the sausage casing of the invention can be biaxially oriented and is shrinkable. It is well known in the sausage are to heat set shrinkable films and to minimize the residual shrinkage thereof. The optimization of the corona treated invention of Krallman according to these well known properties would have produced the invention as claimed in claims 6 and 7.

17. Regarding claim 12: Krallman and Stenger clearly recite using the polyamide casings recited for packaging sausage. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have packaged any sausage within the casing produced by the combination of Krallman with the teachings of Stenger such as those claimed in claim 12.

### ***Response to Arguments***

18. Applicant's arguments filed 4/14/09 have been fully considered but they are not persuasive.

19. Applicant has asserted on pages 6 and 7 of the remarks that "Principles of Colloid and Surface Chemistry" expressly describes surface tension as surface energy, particularly free surface energy and concludes that one of ordinary skill in the art would consider the terms surface tension and surface energy to be interchangeable. Since the section cited by applicant defines surface energy as a force per unit length, and since applicant has stated on the record that the recitation in the specification as filed was the result of a typographical error, the examiner is persuaded that the inclusion of limitations directed towards surface energies in units of dyn/cm do not in this instance constitute new matter and the rejection under 35 USC 112 first paragraph set forth in the previous office action is therefore withdrawn. The examiner also notes that applicant has gone on record to concede that "the nylon and nylon 6,6 noted within the application as filed on page 5, lines 3 through 6 are known in the art to exhibit a surface



energy that are greater than 28 dyn/cm". Since applicant's specification contains only generic recitations of these nylon polymers, the examiner interprets applicant's statement to confirm that the nylon was known in the art at the time the invention was made to inherently display a surface free energy of greater than 28 dyn/cm.

20. Applicant has asserted on pages 9 and 10 of the remarks that Krallman "expressly notes the incorporation of browning agent on numerous occasions" and that as such the deletion of this material from the combination of liquid smoke and browning agent would not be obvious to one of ordinary skill in the art. Applicant further asserts that Krallman "clearly teaches that the liquid smoke and browning agent work in combination" and that "an increased depth of smoke flavor penetration for smoked sausage casings is highly desirable" and that the "omission of an element thought to be required for a highly desirable function clearly evidences the patentability of the claimed invention". However, section 2144.04 of the MPEP does not require that the element to be deleted be undesirable. Applicant has not presented evidence or arguments asserting that the deletion of the browning agent would render the casing of the prior art unsuitable for packaging of sausage nor has applicant refuted the examiner's stated motivation for deletion of this element. Therefore, the examiner is not persuaded that the deletion of the browning agent would not have been obvious to one of ordinary skill in the art who did not desire its function.

21. In response to applicant's arguments against the references individually on pages 11, 13, 15 and 16 of the remarks one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references.

See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

22. Applicant asserts on page 11 of the remarks that Krallman “expressly teaching both nylon 11 and nylon 12 as suitable in its invention, fails to teach or suggest such inventive food casings in which the polyamide and or copolyamide is selected from” polymers including nylon 6, nylon 6,6, nylon 6/6,6, nylon 4,6, nylon 6,10, nylon 6,12, and mixtures thereof. This assertion is wholly inaccurate. Paragraph 38 of Krallman clearly recites each of the polymers applicant asserts is not taught by Krallman. Indeed, all of the references relied upon for structural teachings about polyamide sausage casings cited by the examiner clearly teach nylon 6. As such, applicant assertions on pages 11 and 13 that the prior art cited by the examiner fails to teach the polyamide compositions claimed are spurious.

23. Applicant has asserted on page 12 of the remarks that Stenger fails to teach the claimed polyamide casing. However, note that while Stenger do not disclose all the features of the present claimed invention, Stenger is used as teaching (evidentiary) reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely, that nylon 6 sausage casings having a thickness of 39-41  $\mu\text{m}$  have a water vapor permeability of 20  $\text{g}/\text{m}^2/\text{day}$  permeabilities and in combination with the primary reference, evidences the presently claimed invention.

24. Applicant has asserted on pages 13 and 14 of the remarks that Ramesh fails to teach the claimed polyamide casing. However, note that while Ramesh do not disclose all the features of the present claimed invention, Ramesh is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely, that corona treatment of sausage casings in order to increase the adhesion of the meat to the casing was well known and desirable to one of ordinary skill in the art at the time the invention was made and in combination with the primary reference, discloses the presently claimed invention.

25. Applicant has asserted on pages 15 and 16 of the remarks that Erk fails to teach the claimed polyamide casing. However, note that while Erk do not disclose all the features of the present claimed invention, Erk is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely, polyamide sausage casings with swelling values of greater than 5% in order to prevent the need for additional lubrication and in combination with the primary reference, discloses the presently claimed invention.

26. In response to applicant's argument on page 17 of the remarks that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a

reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In the instant case, the examiner has demonstrated that polyamide sausage casings are universally known and additionally evidenced the properties of permeability and swelling value claimed by applicant. In combination with the teachings of Ramesh regarding corona treatment of sausage casings in order to increase the adhesion of the meat was well known and desirable and applicant's own admission that nylon 6 was known by those of ordinary skill in the art at the time the invention was made to have a surface energy of greater than 28 dyn/cm applicant's claimed invention is obvious in light of the cited prior art.

27. The examiner further notes that "Mere recognition of latent properties in the prior art does not render nonobvious an otherwise known invention. *In re Wiseman*, 596 F.2d 1019, 201 USPQ 658 (CCPA 1979)" (MPEP 2145 II) Applicant has made assertions in the arguments that the inventive casing instantly claimed does not require browning agents. However, this observation by applicant does not render nonobvious the polyamide sausage casings well known in the prior art that have the same properties instantly claimed by applicant. Applicant has failed to provide any limitations distinguishing the instantly claimed invention from the polyamide casings known in the prior art.

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHELE JACOBSON whose telephone number is (571)272-8905. The examiner can normally be reached on Monday-Thursday 8:30 AM-7 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571)272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Examiner /M. J./  
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